



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,665	01/08/2004	Hirofumi Muratani	247268US2SRD DIV	4467

22850 7590 06/21/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

GURSHMAN, GRIGORY

ART UNIT PAPER NUMBER

2132

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/752,665

Applicant(s)

MURATANI, HIROFUMI

Examiner

Grigory Gurshman

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

68y 1. Referring to the independent claims 29-31, Applicant argues that there is no evidence of motivation for modifying the Aggrawal technique by incorporating simplex codes taught in Stern. With respect to this argument examiner points out that teachings of Aggrawal and Stern ~~do~~ provide evidence for motivation to combine the references. In particular, the motivation is provided by Stern as follows:

One of ordinary skill in the art would have been motivated to modify the watermark embedding system by embedding the codeword taken out of the simplex code associated with the user as taught in Stern for verification of the validity of the identification device (see Stern abstract).

2. Applicant further argues that a person of ordinary skill in the art would not be motivated to perform the proposed modification absent improper hindsight reconstruction. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Since the motivation has been shown to be taught from Stern, improper hindsight reconstruction was not employed in combining Aggrawal and Stern.

3. In pages 3 and 4 of the remarks Applicant states a number of features of the claimed invention, which are different from the art of record. Examiner points out that the alleged differences are not reflected in the claims 29-31 and therefore are not persuasive.

4. In view of the reasons presented herein, rejections of claims 29-31 are maintained.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal (US Patent No. 6,834,344 B1) in view of Stern (US Patent No. 5,483,597).

7. Referring to claim 29, Aggarwal discloses semi-fragile watermarks (see abstract). Aggarwal teaches a method for marking high-quality digital images with a robust and invisible watermark. It requires the mark to survive and remain detectable and authenticatable through all image manipulations that in themselves do not damage the image beyond useability. The watermark has the property that it can detect if the essential contents of the image has changed. The first phase of the method comprises extracting a digest or number N from the image so that N only (or mostly) depends on

the essential information content, such that the same number N can be obtained from a scan of a high quality print of the image, from the compressed form of the image, or in general, from the image after minor modifications (introduced inadvertently by processing, noise etc.). The second phase comprises the marking.

8. Referring to claim 29 the limitation “means for embedding the outputted codeword as the watermark information into the content” is met by Fig. 2 (blocks 112 and 113). The digest N is embedded into the image (i.e. content). N is a codeword (see column 9, lines 49-50). The limitation “codeword selected from a plurality of codewords” is met by teaching that N is chosen as the codeword in C nearest to $F(I)$ – see col. 7 lines 43-45. Aggarwal, however, does not teach selecting the codeword from the simplex code according to the user ID.

9. Referring to claim 29, Stern discloses a process for the authentication of at least one identification device by a verification device (see abstract). Stern teaches that the user has several secret codes $s[1], \dots$. It is beneficial if these vectors $s[1], \dots, s[w]$ are forced to form an extended simplex code (see column 2, lines 57-60). These teachings read on the limitation “codewords constructing a simplex code” based on “user identification”.

10. Therefore at the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the watermark embedding system of Aggarwal by embedding the codeword taken out of the simplex code associated with the user as taught in Stern. One of ordinary skill in the art would have been motivated to modify the watermark embedding system by embedding the codeword taken out of the simplex

code associated with the user as taught in Stern for verification of the validity of the identification device (see Stern abstract).

11. Referring to claims 30 and 31, the limitation "obtaining a correlation value between each of the outputted codewords and the content" is met by Fig. 6 of Aggarwal (blocks 502 and 503). The limitation "determining presence of watermark information based on norm calculated... and specifying the colluder based on the correlation value if presence of the watermark is determined" is met by Fig. 8 (see blocks 705-707).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Grigory Gurshman whose telephone number is (571)272-3803. The examiner can normally be reached on 9 AM-5:30 PM.

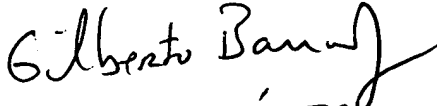
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571)272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GG.

GG

Grigory Gurshman
Examiner
Art Unit 2132


GILBERTO BARRÓN JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100